

PEG 122 105°C

- 105 °C
- Long Life, > 20 years at 50°C
- Low ESR, down to 40mΩ
- Low ESL, down to 5nH

APPLICATION

Smoothing, coupling/decoupling and energy storage in telecommunication, power supply systems, process control and measuring equipment. Due to the long term stability and the low leakage current this series also meets all the requirements for timing and integration.

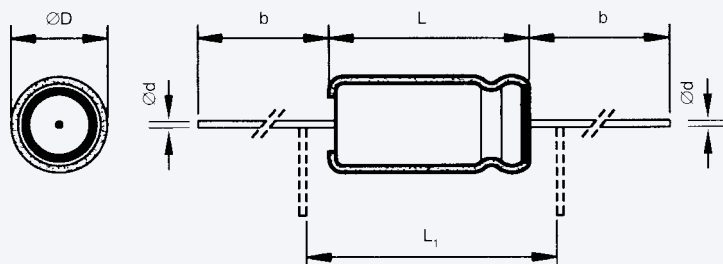
BASIC DESIGN

PEG 122 is a Long Life electrolytic capacitor, high reliability version, polarized, all-welded design, tinned copper wire leads, negative pole connected to the case, plastic insulation. PEG 122 is designed to achieve very Long Life and offer outstanding electrical performance. Long Life and very high reliability is achieved by the dimensioning of the capacitor, the careful selection of materials/ methods and disciplined

quality control. The PEG 122 winding is housed in a cylindrical aluminium can with a high purity aluminium lid and a high performance rubber gasket. The sealing system is designed for electrolyte leakage free operation and a very low gasdiffusion rate of electrolyte. Low ESR is a result of low resistive electrolyte/ paper system and an allwelded design. Thanks to their robust construction they are suitable in mobile and in aircraft installations.

SPECIFICATION

Standards	IEC 384-4 Long Life Grade, 40/105/56, DIN 412401, type 1A, CECC 30300
British Telecom	BT No 4511A
French standard	C031
CECC	CECC DS 30301-021
Capacitance range	2.2–3300μF
Capacitance tolerance	–10 to +30%
Rated voltage	10–100 VDC
Temperature range	–40 to +105°
Shelf life	at 0V +105°C 5000 h, +40°C 10 years
Diameter range	10–20 mm



Dimensions table PEG 122 (mm)

D x L	Case code	D ±0.5	d ±0.03	L ±1	L ₁ min	b + 3/-2	Weight approx (g)	
						Box	Taped	
10 x 20	A	10	0.8	20	26	–	31	3
10 x 29	B	10	0.8	29	35	–	27	4
13 x 29	D	13	0.8	29	35	–	27	6
13 x 37	E	13	0.8	37	43	42	24	7
16 x 29	F	16	0.8	29	35	42	–	8
16 x 37	G	16	0.8	37	43	42	–	11
20 x 37	J	20	0.8	37	43	42	–	20
20 x 46	L	20	0.8	46	52	42	–	24

ARTICLE TABLE PEG 122 (105°C)

C_R	D x L	Case code	I_{RAC}^* 105°C 100 Hz mA	I_{RAC} 40°C 20kHz A	ESR* 20°C 100 Hz Ω	ESR* 20°C 100 kHz Ω	L_{ESL} Approx. nH	Article code 1st block
μF	mm							
10 VDC (U_R)								
100	10 x 20	A	120	1.1	3.10	1.26	5	PEG 122EA3100Q
220	10 x 20	A	260	1.7	1.40	0.58	5	PEG 122EA3220Q
330	10 x 29	B	390	2.1	0.95	0.39	6	PEG 122EB3330Q
680	13 x 29	D	650	3.5	0.46	0.20	8	PEG 122ED3680Q
1000	13 x 29	D	780	4.0	0.31	0.15	8	PEG 122ED4100Q
1500	16 x 29	F	1120	5.9	0.21	0.09	10	PEG 122EF4150Q
2200	16 x 37	G	1360	6.9	0.14	0.07	12	PEG 122EG4220Q
3300	20 x 37	J	1800	8.8	0.10	0.05	15	PEG 122EJ4330Q
16 VDC (U_R)								
68	10 x 20	A	130	1.1	2.80	1.32	5	PEG 122GA2680Q
100	10 x 20	A	190	1.4	1.90	0.84	5	PEG 122GA3100Q
150	10 x 20	A	270	1.6	1.20	0.64	5	PEG 122GA3150Q
220	10 x 29	B	340	2.1	0.86	0.41	6	PEG 122GB3220Q
470	13 x 29	D	570	3.5	0.40	0.19	8	PEG 122GD3470Q
680	13 x 29	D	780	4.1	0.28	0.15	8	PEG 122GD3680Q
1000	16 x 29	F	960	5.6	0.19	0.10	10	PEG 122GF4100Q
1500	16 x 37	G	1200	6.9	0.12	0.07	12	PEG 122GG4150Q
2200	20 x 37	J	1590	8.8	0.09	0.05	15	PEG 122GJ4220Q
25 VDC (U_R)								
33	10 x 20	A	100	1.0	5.70	1.38	5	PEG 122HA2330Q
47	10 x 20	A	140	1.4	4.00	0.84	5	PEG 122HA2470Q
100	10 x 20	A	230	1.7	1.90	0.54	5	PEG 122HA3100Q
150	10 x 29	B	300	2.3	1.20	0.36	6	PEG 122HB3150Q
220	13 x 29	D	410	3.0	0.86	0.26	8	PEG 122HD3220Q
470	16 x 29	F	700	5.0	0.40	0.12	10	PEG 122HF3470Q
680	16 x 29	F	850	5.9	0.28	0.09	10	PEG 122HF3680Q
1000	16 x 37	G	1110	7.5	0.19	0.06	12	PEG 122HG4100Q
1500	20 x 37	J	1450	9.6	0.12	0.04	15	PEG 122HJ4150Q
40 VDC (U_R)								
22	10 x 20	A	100	1.0	5.70	1.48	5	PEG 122KA2220Q
33	10 x 20	A	140	1.4	3.80	0.82	5	PEG 122KA2330Q
47	10 x 20	A	175	1.5	2.70	0.71	5	PEG 122KA2470Q
68	10 x 29	B	210	2.0	1.80	0.41	6	PEG 122KB2680Q
100	10 x 29	B	275	2.4	1.20	0.34	6	PEG 122KB3100Q
150	13 x 29	D	375	3.1	0.84	0.24	8	PEG 122KD3150Q
220	13 x 29	D	480	4.1	0.57	0.15	8	PEG 122KD3220Q
330	13 x 37	E	580	4.9	0.38	0.11	10	PEG 122KE3330Q
470	16 x 29	F	790	6.2	0.27	0.08	10	PEG 122KF3470Q
680	16 x 37	G	960	7.4	0.18	0.06	12	PEG 122KG3680Q
1000	20 x 37	J	1240	8.7	0.12	0.05	15	PEG 122KJ4100Q
63 VDC (U_R)								
2.2	10 x 20	A	34	1.1	57.00	1.05	5	PEG 122MA1220Q
3.3	10 x 20	A	43	1.2	38.00	0.90	5	PEG 122MA1330Q
4.7	10 x 20	A	48	1.3	27.00	0.85	5	PEG 122MA1470Q
6.8	10 x 20	A	58	1.3	18.00	0.83	5	PEG 122MA1680Q
10	10 x 20	A	76	1.4	12.50	0.80	5	PEG 122MA2100Q
15	10 x 20	A	110	1.5	8.40	0.72	5	PEG 122MA2150Q
22	10 x 20	A	135	1.5	5.70	0.70	5	PEG 122MA2220Q
33	10 x 29	B	160	2.0	3.80	0.42	6	PEG 122MB2330Q
47	10 x 29	B	190	2.0	2.70	0.42	6	PEG 122MB2470Q
68	10 x 29	B	240	2.4	1.80	0.30	6	PEG 122MB2680Q
100	13 x 29	D	325	3.4	1.20	0.20	8	PEG 122MD3100Q
150	13 x 29	D	415	4.4	0.84	0.13	8	PEG 122MD3150Q

* Maximum values

ARTICLE TABLE PEG 122 (105°C)

C_R	D x L	Case code	I_{RAC}^* 105°C 100 Hz mA	I_{RAC} 40°C 20kHz A	ESR* 20°C 100 Hz Ω	ESR* 20°C 100 kHz Ω	L_{ESL} Approx. nH	Article code 1st block
μF	mm							
63 VDC (U_R)								
220	16 x 29	F	580	5.6	0.57	0.10	10	PEG 122MF3220Q
330	16 x 37	G	710	6.8	0.38	0.07	12	PEG 122MG3330Q
470	20 x 37	J	940	8.7	0.27	0.05	15	PEG 122MJ3470Q
100 VDC (U_R)								
4.7	10 x 20	A	48	0.72	16.00	3.00	5	PEG 122PA1470Q
10	10 x 20	A	84	0.85	6.70	2.40	5	PEG 122PA2100Q
22	10 x 29	B	115	1.00	3.50	1.60	6	PEG 122PB2220Q
33	10 x 29	B	125	1.30	3.50	1.10	6	PEG 122PB2330Q
47	13 x 29	D	195	1.70	1.70	0.77	8	PEG 122PD2470Q
68	13 x 37	E	245	2.10	1.20	0.53	10	PEG 122PE2680Q
100	16 x 29	F	360	2.80	0.85	0.42	10	PEG 122PF3100Q
150	16 x 37	G	450	3.70	0.54	0.25	12	PEG 122PG3150Q
220	20 x 37	J	610	5.00	0.37	0.17	15	PEG 122PJ3220Q

* Maximum values

OPERATIONAL DATA

Please see operational lifetime section, page 62.

RELIABILITY

The failure rate is derived from our periodic test results. The failure rate (λ_R) is therefore only given at test temperature for life tests. An estimation is also given at 60°C.

The expected failure rate for this capacitor range is based on our periodic test results for capacitors with structural similarity.

T_a	Failure rate per hour
100°C	1×10^{-6}
60°C	1×10^{-8}

Failure rate per hour for catastrophic plus parametric failures.

TECHNICAL DATA

Leakage current

Rated leakage current, I_{RL} (μA)Rated voltage, U_R (V)Rated capacitance, C_R (μF)For $C_R \times U_R \leq 1000$ $I_{RL} = 0.01 \times C_R \times U_R$ For $C_R \times U_R > 1000$ $I_{RL} = 0.003 \times C_R \times U_R + 4$

ORDERING INFORMATION

1st block (pos 1–13)

P	E	G	1	2	2	K	D	3	1	5	0	Q
1	2	3	4	5	6	7	8	9	10	11	12	13

2nd block (pos 14–20)

T	1								
14	15	16	17	18	19	20			

Capacitance tolerances:
Pos. 13: Q: -10 to +30%

T1: taped delivery on reels
L1: Packed in boxes

Quantities and weights

CASE CODE	A	B	D	E	F	G	J	L
Weight approx (g)	3	4	6	7	8	10	14	17
Standard content per reel	500	500	400	400 ¹				
Standard box quantity	250 ¹	200 ¹	200 ¹	100	100	100	100	100

¹ On request.